Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

25X1A

[redacted]

NIMA/DOD

CONFIDENTIAL

September 23, 1965

25X1A

[redacted]

Enclosed, please find copies of our monthly progress reports for the Zoom Magnifier Project. These reports represent the 10th through the 14th monthly progress reports, covering the period of 21 February 1965 to 20 July 1965.

We hope to be advising you very shortly of thefavorable results of our investigations for an improved zoom magnifier. In the meantime, if you have any questions concerning this project, please contact the writer directly.

Very truly yours,

[redacted]

25X1A

25X1A [redacted] HOM

[redacted]
Photogrammetric Contracts Section

Declass Review by
NIMA/DOD

Group 1
Excluded from automatic
downgrading and
declassification

CONFIDENTIAL

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Tenth Monthly Progress Report

For a

Zoom Magnifier

This tenth monthly progress report covers the period 21 February 1965 to 20 March 1965.

Manufacturing and assembly was completed during this reporting period. The Magnifier will be delivered to the customer early in the next period.

There were no customer visits this period.

STATINTL

[redacted]

WJW:sb

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Eleventh Monthly Progress Report

For a

Zoom Magnifier

This eleventh monthly progress report covers the period 21 March 1965 to 20 April 1965.

The Magnifier was delivered to the customer on 30 March 1965. It was returned that same evening with the following comments:

1. Size, weight and overall mechanical movements are acceptable.

2. Dissatisfaction with the optical quality, especially the effect of field curvature.

3. Reflections seen off some lens mounts.

4. Resolution good.

5. Stays in focus throughout zoom range.

STATINTL

To reduce the field curvature, the length of the Magnifier must increase. This would also add to the weight of the instrument.

The customer will visit [redacted] in several weeks. It was thus concluded that further discussion would be held then to discuss the problems in more detail.

There were no further customer visits during the reporting period.

STATINTL

[redacted]

WJW:sb

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Twelfth Monthly Progress Report

For a

Zoom Magnifier

This twelfth monthly progress report covers the period 21 April 1965 to 20 May 1965.

The minutes of a customer visit on 23 April 1965 are given below:

Customer Visit: April 23, 1965

Present: Customer's technical representatives

STATINTL [redacted]

The weight, height and feel of the Magnifier are satisfactory. The bead chain should be mounted above the center of gravity and be easily detachable. A distinction between the actual and useable field was made. The actual field was defined as that through which light passes, the useable field as that through which good image quality is viewed. The useable field was noted to be less than the actual field due to lens aberrations.

The actual field of view could be increased by 2mm by increasing the height 10mm and the diameter 4mm. Pincushion distortion was noted in the optical system.

The magnifier and the mockup were taken by the customer to perform a full evaluation and subject the instrument to field testing.

STATINTL

[redacted]

WJW:sb

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Thirteenth Monthly Progress Report

For a

Zoom Magnifier

This thirteenth monthly progress report covers the period 21 May 1965 to 20 June 1965.

The customer has the instrument for evaluation and field testing.

STATINTL

[redacted]

WJW:sb

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Fourteenth Monthly Progress Report

For a

Zoom Magnifier

This fourteenth monthly progress report covers the period 21 June 1965 to 20 July 1965.

Minutes of a meeting held 7 July 1965 follow.

STATINTL

[redacted]

WJW:sb

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Minutes of Meeting

Zoom Magnifier - July 7, 1965 STATINTL

Present: [redacted]

The customer's evaluation of the Zoom Magnifier was discussed. Deficiencies were pointed out as follows:

Internal Reflections - These appear to be caused by a shallow angle of light reflection off of a blackened surface. This could be improved by threading the internal surfaces.

Pincushion Distortion - This is common in magnifiers. It would not be objectionable if image quality at the edge of the field is improved.

Focus Drift - It appeared that improper focusing at high magnification would result in focus drift when zooming. The instrument was previously tested on a lens bench and appeared to stay in good focus throughout the range. This point should be rechecked and results again compared with the customer's findings.

"Field Curvature" (preferably called aberrations, or degradation of the image at the edge of the field) - The customer feels that this results in a need to define "usable field" vs. field of view. By the definition of "usable field" we do not meet the performance specifications on this point. STATINTL

[redacted] indicated that this could be improved by splitting the three moving zoom elements. This would add approximately 4 to 6mm to the height of the instrument.

Resolution - The customer's test results were given to E-55 Department. These should be compared to our results and the instrument retested to insure compatability of results.

Other minor defects were discussed which included the mounting of the chain at a higher point on the instrument. The customer was not prepared to state his preference for either of the two sizes of eyelenses.

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8

The customer commented about a "tunneling effect" (the effect of varying apertures controlling the field of view). This presently appears to be inherent in zoom magnifiers and that it would not hinder the operator's efficiency, once he has become accustomed to it.

All of the above points should be reviewed and a proposal submitted for their solution. The customer will check into the possibility of establishing new performance incentives. It was pointed out that the instrument failed only in the field of view requirements, which in effect is non-contractual grounds for rejection. As we are interested in obtaining a mutually satisfactory result, the Sales Department will discuss future arrangements with the customer.

STATINTL

STATINTL

[redacted]ed
Copies to those present
[redacted]

Approved For Release 2001/11/19 : CIA-RDP78B04747A000300040034-8